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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/711,287	Applicant(s) SHORT, KEITH	
	Examiner MARK P. FRANCIS	Art Unit 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the amendment filed February 15, 2008.
2. Per applicants' request, claims 1,8,11, and 18 have been amended. Claim 23 has been newly introduced.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-20 and 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 1, where Applicant states "having a fewer number of input ports than said embedded processor." Is not properly supported by Applicants' specification.

Nowhere inside the specification does Applicant define or disclose an embedded processor being operable on a single board that has fewer input ports than the embedded processor.

Regarding claim 11, where Applicant states "having a first number of output ports and said device having fewer output ports than the embedded processor." Is not properly

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supported by Applicants' specification. Nowhere inside the specification does Applicant define or disclose an embedded processor being operable on a single board that has fewer output ports than the embedded processor.

Regarding claim 23, where Applicant states "comprising fewer input paths and fewer output paths than said embedded processor." Is not properly supported by Applicants' specification. Nowhere inside the specification does Applicant define or disclose specific board level circuitry comprising fewer input paths and fewer output paths than said embedded processor.

The rejection of the independent claims are incorporated into their dependent claims.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

6. A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 21 are rejected under 35 U.S.C. 102(e) as being anticipated by DeRolf.
(U.S. Pat 6,904,544)

With respect to claim 21, DeRolf discloses a test system comprising:

a reusable test sequence; (Col 4:5-15, "...implement the expert diagnostic system...comprised of one or more of the test modules...")

a first command interpreter adapted to interpret said reusable test sequence, (Col 3:40-50, "...The rule base code references test descriptors....")said first command interpreter being adapted to operate on a first embedded processor;(Col 3:34-45, "...installed on host systems 2 and 4 to test paths...", e.g. See Fig. 1, elements 2 and 4 and related text)

and a second command interpreter (Col 3:40-50, "...The rule base code references test descriptors....") adapted to interpret said reusable test sequence, (Col 3:34-45, "...installed on host systems 2 and 4 to test paths...", e.g. See Fig. 1, elements 2 and 4 and related text)

said second command interpreter being adapted to operate on a second embedded processor; ;(Col 3:34-45, "...installed on host systems 2 and 4 to test paths...", e.g. See Fig. 1, elements 2 and 4 and related text) wherein said first command interpreter and said second command interpreter each comprise: a command interface adapted to receiving commands(Col 3:60-67, "...such as command line or graphical user interface...") and outputting results; (Col 11:20-30, "...verbose command causes the state machine to display all messages to a screen display...")

an engine adapted to running a test sequence; (Col 4:5-15, "...implement the expert diagnostic system...comprised of one or more of the test modules...")

an output driver adapted to timestamping an outgoing message and storing said outgoing message; (Col 11:45-55, "...a start record with a timestamp...")

an input driver adapted to timestamping an incoming message and storing said incoming message; (Col 11:45-55, "...a start record with a timestamp...") and an analysis routine adapted to analyzing said outgoing message and said incoming message. (Col 11:45-60, "...These error log files contain important information that should accompany the failed components back to the repair station...")

8. Claim 22 is rejected under 35 U.S.C. 102(e) as being anticipated by Oberlaender. (U.S. PGPUB 2005/0102572)

With respect to claim 22, Oberlaender discloses a method of developing a circuit(Col 3:0023-0024, "...a circuit designer...") having an embedded processor(Col 1:0004, "...the embedded processor...") comprising: designing a circuit having said embedded processor, said circuit having a predefined function;(Col 3:0024, "...the design circuit model...")

assembling said circuit; (Col 3:0023, "...The circuit designer typically defines an SOC circuit...")

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designing software operable on said embedded processor, said software adapted to enable said circuit to perform said predefined function; (Col 3:0023, "...Equivalency checking...")

loading said embedded processor with a test platform software(Col 3:0025, "...simulation model includes a processor core...") comprising: a command interface adapted to receiving commands and outputting results; (Col 4:0027, "...to interface circuit...")

an engine adapted to running a test sequence;(Col 2:0012, "...each write operation of the test program...")

an output driver adapted to timestamping an outgoing message and storing said outgoing message; (Col 4:0027, "...having timestamp values...")

an input driver adapted to timestamping an incoming message and storing said incoming message; (Col 6:0047-0048, "...having timestamp values...")

an analysis routine adapted to analyzing said outgoing message and said incoming message and create results; (Col 8:0061-0062, "...that does not match the instantaneous data values...")

and a display routine for displaying said results; (Col 8:0063, "...Data is typically written to fifo devices...")

creating said test sequence;(Col 8:0062, "...sanity check tool...")

transmitting said test sequence to said embedded processor loaded with said test platform software; (Col 6:0048, "...parallel shows the transaction stream...")

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operating said test sequence on said embedded processor; (Col 7:0050, "...automatic tests of the memory content...")

and analyzing said results.(Col 8:0060, "...the sanity check process begins...")

9. Claim 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Toth. (U.S. Pat 4,829,520)

With respect to claim 23, Toth discloses a turn on software suite(Col 1:50-60, "...an on-board self diagnostic capability is realized in a circuit board with a microprocessor...") comprising:

A bootstrap code(Col 2:60-67, "...diagnostic sequences can be applied to circuitry via input leads...") configured to start said software suite on an embedded processor,(Col 3:10-25, "...to initiate selected routines..."; col. 3, lines 35-52; col. 4, lines 38-45) said embedded processor being embodied in a single board device having application specific board level circuitry,(Col 2:13-30, "...the on-board micro-processor, and the on-board electrically erasable memory...") said embedded processor having a first number of input paths(Col 2:20-35, "...board input leads...") and a second number of output paths;(Col 2:2—35, "...board output leads...")

A test engine configured to create a plurality of test workers;(Col 3:35-50, "...Consequently microprocessor can initiate diagnostic routines automatically in response...")

Each of said test workers being configured to exercise one of said input path or output path;(Col 3:15-35, "...it can initiate various registers, set different thresholds...")

Said turn on software suite being capable of executing on said embedded processor ,(Col 3:10-25, "...to initiate selected routines...")and operating said plurality of test workers, (Col 4:35-50, "...a routine embedded in microprocessor that detects the initiation of operations...")said application specific board level circuitry comprising fewer input paths and fewer output paths than said embedded processor. (e.g. See Fig. 1, elements Input 11, 104user Data, and 105, user Control and related text)

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeRolf (U.S. Pat 6,904,544) in view of Toth. (U.S. Pat 4,829,520)

With respect to claim 1, DeRolf discloses a software diagnostics platform(Col 14:54-65, "...a processor...a diagnostic software embedded...") comprising:

a command interface adapted to receiving commands(Col 3:60-67, "...such as command line or graphical user interface...") and outputting results; (Col 11:20-30, "...verbose command causes the state machine to display all messages to a screen display...")

an engine adapted to running a test sequence; (Col 4:5-15, "...implement the expert diagnostic system...comprised of one or more of the test modules...")

an output driver adapted to timestamping an outgoing message and storing said outgoing message; (Col 11:45-55, "...a start record with a timestamp...")

an input driver adapted to timestamping an incoming message and storing said incoming message; (Col 11:45-55, "...a start record with a timestamp...")

and an analysis routine adapted to analyzing said outgoing message and said incoming message; (Col 11:45-60, "...These error log files contain important information that should accompany the failed components back to the repair station...")

but does not disclose

said software diagnostics platform being operable on an embedded processor being operable on a single board having fewer number of input ports than said embedded processor.

Toth discloses said software diagnostics platform being operable on an embedded processor(Col 3:10-25, "...Microprocessor...") being operable on a single board(e.g. See Fig. 1 element Board) having fewer number of input ports than said embedded processor(e.g. See Fig. 1, elements Input 11, 104user Data, and 105, user Control and

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related text) in an analogous system for the purpose of providing and communicating fault diagnostics in electronic circuits to repair systems.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to create a software diagnostics tool operable on an embedded processor being operable on a single board having fewer number of input ports than the embedded processor.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to provide and communicate fault diagnostics in electronic circuits to repair systems.

With respect to claim 2, the rejection of claim 1 is incorporated and further, DeRolf discloses that the command interface is operable to communicate via a terminal interface. (Col 3:59-67, "...entered through a host system interface...")

With respect to claim 3, the rejection of claim 1 is incorporated and further, DeRolf discloses further comprising: a host program operable on a host system, said host program having a graphical user interface. (Col 3:59-67, "...or graphical user interface...")

With respect to claim 4, the rejection of claim 1 is incorporated and further, DeRolf discloses that the test sequence comprises a single test routine. (Col 3:45-60, "...Each test module...")

With respect to claim 5, the rejection of claim 1 is incorporated and further, DeRolf discloses that the test sequence comprises a test routine that is repeated for a predetermined period of time. (Col 7:48-55, "...to run a series of isolation tests on the disk...")

With respect to claim 6, the rejection of claim 1 is incorporated and further, DeRolf discloses that the test sequence comprises multiple threads of commands. (Col 3:59-67, "...user input commands...")

With respect to claim 7, the rejection of claim 1 is incorporated and further, DeRolf discloses that the input driver is further adapted to validate said incoming message. (Col 13:15-20, "...a device interface...")

With respect to claim 9, the rejection of claim 1 is incorporated and further, DeRolf discloses further comprising an initiator adapted to determine if an I/O device is present. (Col 13:15-20, "...a device interface...")

With respect to claim 10, the rejection of claim 9 is incorporated and further, DeRolf discloses that the initiator is further adapted to perform a diagnostic routine with said I/O device. (Col 11:13-20, "...the diagnostic routine...")

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeRolf (U.S. Pat 6,904,544) in view of Toth. (U.S. Pat 4,829,520) and further in view of Benner. (U.S. Pat 5,072,371)

With respect to claim 8, the rejection of claim 1 is incorporated and further, Neither DeRolf nor Toth disclose that the analysis comprises determining one of a group composed of: message transfer time, average message transfer time, and average data throughput per unit time.

Benner discloses that the analysis comprises determining one of a group composed of: message transfer time, average message transfer time, and average data throughput per unit time (Col 30:40-55, "...and transfer time for a subsequent message overlaps the transfer time for a previous message...") in an analogous system for the purpose of providing efficient communication between parallel processors that communicate fault diagnostics to repair systems.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to create a software diagnostics tool that determines the average message transfer time between messages.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to provide efficient communication between parallel processors that communicate fault diagnostics to repair systems.

13. Claims 11-17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toth. (U.S. Pat 4,829,520) in view of DeRolf (U.S. Pat 6,904,544)

With respect to claim 11, Toth discloses a system comprising: a device with an embedded processor,(Col 2:13-30, ‘...the on-board microprocessor...’) said device having a specific function,(Col 2:13-35, “...the functional circuitry performs whatever function is desired of the board...”) said embedded processor having a first number of output ports(Col 3:10-25, “...Status indication output may be a multi-lead output...”) and said device having fewer output ports than said embedded processor;(Col 2:13-30, ‘...board output leads...’) but does not disclose a first software system operable to run on said embedded processor and enable said device to perform said specific function;

and a second software system operable to run on said embedded processor, said second software system comprising: a command interface adapted to receiving commands and outputting results;

an engine adapted to running a test sequence; an output driver adapted to timestamping an outgoing message and storing said outgoing message; an input driver adapted to timestamping an incoming message and storing said incoming message;

and an analysis routine adapted to analyzing said outgoing message and said incoming message.

DeRolf discloses a first software system operable to run on said embedded processor(Col 3:34-40, "...a storage diagnostic tool that may be installed on host systems...") and enable said device to perform said specific function; (Col 3:45-55, "...Each test module includes code implementing a particular test operation...")

and a second software system operable to run on said embedded processor,(e.g. See Fig. 1, element 4) said second software system comprising: a command interface adapted to receiving commands(Col 3:60-67, "...such as command line or graphical user interface...") and outputting results; (Col 11:20-30, "...verbose command causes the state machine to display all messages to a screen display...")an engine adapted to running a test sequence; (Col 4:5-15, "...implement the expert diagnostic system...comprised of one or more of the test modules...")

an output driver adapted to timestamping an outgoing message and storing said outgoing message (Col 11:45-55, "...a start record with a timestamp..."), said output

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driver being configured to send said outgoing message to each of said first number of output ports; (Col 1:30-40, ‘...tests all qualified disks in a storage device that may be reached through a path...’)

an input driver adapted to timestamping an incoming message and storing said incoming message; (Col 11:45-55, ‘...a start record with a timestamp...’)

and an analysis routine adapted to analyzing said outgoing message and said incoming message. (Col 11:45-60, ‘...These error log files contain important information that should accompany the failed components back to the repair station...’) in an analogous system for the purpose of providing and communicating fault diagnostics in electronic circuits to repair systems.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to create a software diagnostics tool operable on an embedded processor being operable on a single board having fewer number of input ports than the embedded processor.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to provide and communicate fault diagnostics in electronic circuits to repair systems.

With respect to claim 12, the rejection of claim 11 is incorporated and further, DeRolf discloses that the command interface is operable to communicate via a terminal interface. (Col 3:59-67, "...entered through a host system interface...")

With respect to claim 13, the rejection of claim 11 is incorporated and further, DeRolf discloses further comprising: a host program operable on a host system, said host program having a graphical user interface. (Col 3:59-67, "...or graphical user interface...")

With respect to claim 14, the rejection of claim 11 is incorporated and further, DeRolf discloses that the test sequence comprises a single test routine. (Col 3:45-60, "...Each test module...")

With respect to claim 15, the rejection of claim 11 is incorporated and further, DeRolf discloses that the test sequence comprises a test routine that is repeated for a predetermined period of time. (Col 7:48-55, "...to run a series of isolation tests on the disk...")

With respect to claim 16, the rejection of claim 11 is incorporated and further, DeRolf discloses that the test sequence comprises multiple threads of commands. (Col 3:59-67, "...user input commands...")

With respect to claim 17, the rejection of claim 11 is incorporated and further, DeRolf discloses that the input driver is further adapted to validate said incoming message. (Col 13:15-20, "...a device interface...")

With respect to claim 19, the rejection of claim 11 is incorporated and further, DeRolf discloses further comprising an initiator adapted to determine if an I/O device is present. (Col 13:15-20, "...a device interface...")

With respect to claim 20, the rejection of claim 19 is incorporated and further, DeRolf discloses that the initiator is further adapted to perform a diagnostic routine with said I/O device. (Col 11:13-20, "...the diagnostic routine...")

14. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toth. (U.S. Pat 4,829,520) in view of DeRolf (U.S. Pat 6,904,544) and further in view of Benner. (U.S. Pat 5,072,371)

With respect to claim 18, the rejection of claim 1 is incorporated and further,

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Neither Toth nor DeRolf disclose that the analysis comprises determining one of a group composed of: message transfer time, average message transfer time, and average data throughput per unit time.

Benner discloses that the analysis comprises determining one of a group composed of: message transfer time, average message transfer time, and average data throughput per unit time (Col 30:40-55, "...and transfer time for a subsequent message overlaps the transfer time for a previous message...") in an analogous system for the purpose of providing efficient communication between parallel processors that communicate fault diagnostics to repair systems.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to create a software diagnostics tool that determines the average message transfer time between messages.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to provide efficient communication between parallel processors that communicate fault diagnostics to repair systems.

Response to Arguments

15. Applicant's arguments filed on February 15, 2008 have been fully considered but they are not persuasive. Following is the Examiner's response to Applicants' arguments.

With respect to claim 1, Applicant essentially argues that DeRolf et al. does not anticipate the features of this claim because DeRolf et al. does not teach or suggest timestamping an outgoing message or an incoming message.

In response, the Examiner notes Col 11:20-50, it is here that DeRolf teaches that when invoking the diagnostic test, the administrator may specify various commands or arguments for controlling the extent and operation of the diagnostic test. DeRolf discloses that some of the commands or arguments include a verbose command which causes the state machine to output or display all outgoing messages to a screen display and log files. In addition, DeRolf also teaches that the invention include silent commands that instruct the state machine to record all the incoming messages to log files only and when the expert diagnostic tool is invoked with the mentioned commands, the state machine records a start record that includes a timestamp of both the incoming messages of the verbose command and the outgoing message of the silent commands into the activity log.

With respect to claim 21, Applicant argues that the Office has not cited with specificity where in the cited references are a first command interpreter adapted on a first embedded processor and a second command interpreter adapted to operate on a second embedded processor.

In reply, the Examiner has specifically written out independent claim 21 and has specifically cited sections in DeRolf that disclose a first interpreter operable on a first embedded processor and a second interpreter operable on a second embedded processor. The Applicant is reminded that it is their duty to fully read the references provided by the Examiner and therefore a new non-Final action will not be granted.

With respect to claims 6 and 16, Applicant essentially argues that DeRolf does not teach or disclose multiple threads of commands.

In response, The Examiner differs, Note Col 11:20-35, it is here that DeRolf teaches that while invoking the diagnostic test the administrator may invoke one or more commands such as the verbose command, silent command, read only, write-read, aggressive, and everything commands. In addition, the Examiner Note Col 12:20-33, it is here that DeRolf teaches that in other embodiments, different program architectures can be used to associate descriptors or program objects with different functions called according to the diagnostic test operations. Therefore, DeRolf does teach multiple threads of commands.

With respect to claims 7 and 17, Applicant essentially argues that DeRolf does not teach or disclose validation of an incoming message.

In reply, the Examiner differs, Note Col 4:38-50, it is here that DeRolf discloses that during loopback diagnostics, data that is sent through the loopback path is compared and validated against data that was originally sent through the path to determine if the data has changed during transmission. Thus DeRolf does teach validation of an incoming message in a communication path.

With respect to claims 9 and 19, Applicant argues that DeRolf does not teach or disclose the device interface is anything but a passive component and does not teach that the device interface can perform any active functions, let alone determining if an I/O device is present.

In reply, the Examiner differs, Note Col 13:10-30, it is here that DeRolf teaches that in determining a path in the system to test, the path components include a host adapter, a link, a device interface, a device and an initial test is performed to determine if there is a failure in the path that could include determining if an I/O device is present. If an I/O device is not present it would generate an error in the communication path. Therefore, DeRolf does teach or disclose the device interface is anything but a passive component and does teach that the device interface can perform any active functions.

With respect to claims 10 and 20, Applicant essentially argues that DeRolf does not teach that the initiator be further adapted to perform a diagnostic routine with the I/O device.

In reply, the Examiner disagrees, Note Col 11:10-45, it is here that DeRolf teaches that in order to initiate the diagnostic routine, the administrator would specify a path or host adapter(initiator) through a user interface on the I/O device and control the operation of the diagnostic test may entering several arguments. Thus, DeRolf does teach that the initiator be further adapted to perform a diagnostic routine with the I/O device.

With respect to claim 22, Applicant essentially argues that Oberlaender et al does not teach or disclose software operable on said embedded processor.

In response, the Examiner differs, Note Col 3:0025, it is here that Oberlaender teaches that the simulation model includes a processor core that can process program instructions that are associated with test programs and data file that are stored in the memory array. Later on Oberlaender mentions that separate program and data memory devices may be used. Therefore, Oberlaender does teach software operable on said embedded processor.

In addition, regarding claim 22, applicant essentially argues that Oberlaender et al does not teach or disclose a command interface adapted to receiving commands and displaying results.

In reply, The Examiner disagrees, note Col 2:0009-0012, it is here that Oberlaender teaches that for each read and write operation of the test program transaction records are generated and maintained in memory that include a timestamp value indicating when the transaction occurred along with the address information identifying the memory cells that were modified as a result. It is also stated that the memory contents at any point in time during the simulated execution can be visually displayed along with the outputs to a GUI by combining the initial data values and the relevant transaction records.

Conclusion

16. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK P. FRANCIS whose telephone number is (571)272-7956. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on (571)272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lewis A. Bullock, Jr./
Supervisory Patent Examiner, Art Unit 2193